IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attorney Docket No.:	**UT-0031**
Inventors:	**Mayer-Proschel et al.**
Serial No.:	**09/813,429**
Filing Date:	**March 21, 2001**
Examiner:	**Not Yet Assigned**
Group Art Unit:	**1645**
Title:	**Method of Isolating Human Neuroepithelial Precursor Cells from Human Fetal Tissue**

I, **Kathleen A. Tyrrell**, Registration No. **38,350**, certify that this correspondence is being depositing with the U.S. Postal Service as First Class mail in an envelope addressed to the Assistant Commissioner for Patents and Trademarks, Washington, D.C. 20231.

On this date: **September 18, 2001**

Kathleen A. Tyrrell, Registration No. **38,350**

Assistant Commissioner for Patents
Washington, DC 20231

Sir:

INFORMATION DISCLOSURE STATEMENT

Pursuant to 37 C.F.R. §1.56 and in accordance with 37 C.F.R. §§1.97-1.98, information relating to the above-identified application is hereby disclosed. Inclusion of information in this statement is not to be construed as an admission that this information is material as that term is defined in 37 C.F.R. §1.56(b).

(XX) In accordance with §1.97(b), since this Information Disclosure Statement is being filed either within three months of the filing date of the above-identified application, within three months of the date of entry into

the national stage of the above identified application as set forth in §1.491, or before the mailing date of a first Office Action on the merits of the above-identified application, no additional fee is required.

( ) In accordance with §1.97(c), this Information Disclosure Statement is being filed after the period set forth in §1.97(b) above but before the mailing date of either a Final Action under §1.113 or a Notice of Allowance under §1.311, therefore:

( ) Certification in Accordance with §1.97(e) is set forth below; or

( ) The fee of $**180.00** as set forth in §1.17(p) is attached.

( ) In accordance with §1.97(d), this Information Disclosure Statement is being filed after the mailing date of either a Final Action under §1.113 or a Notice of Allowance under §1.311 but before the payment of the Issue Fee, therefore included are: Certification in Accordance with §1.97(e); Petition Requesting Consideration of the Information Disclosure Statement; and the fee of $**130.00** as set forth in §1.17(i)(1).

(XX) Copies of each of the references listed on the attached Form PTO-1449 (modified) are enclosed herewith.

( ) In accordance with §1.98(d), copies of some or all of the references listed on the attached Form PTO-1449 (modified) are not enclosed herewith because they were previously

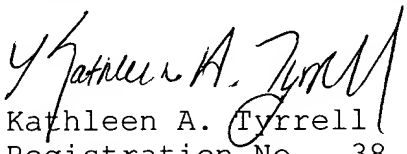
submitted to the U.S. Patent and Trademark Office in prior application Serial No. _____, filed _____, for which a claim for priority under 35 U.S.C. §120 has been made in the instant application.

Please charge any deficiency or credit any overpayment to Deposit Account No. 50-1619. This form is submitted in duplicate.

( ) The relevance of the listed references in a foreign language is as stated in the specification at pages @@.

(XX) All listed references are in the English language.

Respectfully submitted,



Kathleen A. Tyrrell
Registration No. 38,350

Date: **September 18, 2001**

Licata & Tyrrell P.C.
66 E. Main Street
Marlton, New Jersey 08053

(856) 810-1515

Form PTO-1449 Modified List of Patents and Publications Cited by Applicant (Use several sheets if necessary) U.S. Department of Commerce	Docket No. **UT-0031**	Serial No. **09/813,429**
	Applicant **Mayer-Proschel et al.**	
	Filing Date **March 21, 2001**	Group **1645**

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	AA	Ahmed et al., "BDNF Enhances the Differentiation but Not the Survival of CNS Stem Cell-Derived Precursors", *J. Neurosci.* **1995** 15:5765-5778
	AB	Brannen C.L. and Sugaya K., "In vitro differentiation of multipotent human neural progenitors in serum-free medium", *NeuroReport* **2000** 11:1123-1128
	AC	Carpenter et al., "In Vitro Expansion of a Multipotent Population of Human Neural Progenitor Cells", *Exp. Neurol.* **1999** 158:265-278
	AD	Chiasson et al., "Adult Mammalian Forebrain Ependymal and Subependymal Cells Demonstrate Proliferative Potential, but only Subependymal Cells Have Neural Stem Cell Characteristics", *J. Neurosci.* **1999** 19:4462-4471
	AE	Corbeil et al., "The Human AC133 Hematopoietic Stem Cell Antigen Is also Expressed in Epithelial Cells and Targeted to Plasma Membrane Protrusions", *J. Biol. Chem.* **2000** 275:5512-5520
	AF	Doetsch et al., "Subventricular Zone Astrocytes Are Neural Stem Cells in the Adult Mammalian Brain", *Cell* **1999** 97:703-716
	AG	Doetsch et al., "Cellular Composition and Three-Dimensional Organization of the Subventricular Germinal Zone in the Adult Mammalian Brain", *J. Neurosci.* **1997** 17:5046-5061
	AH	Eriksson et al., "Neurogenesis in the adult human hippocampus", *Nat. Med.* **1998** 4:1313-1317
	AI	Fricker et al., "Site-Specific Migration and Neuronal Differentiation of Human Neural Progenitor Cells after Transplantation in the Adult Rat Brain", *J. Neurosci.* **1999** 19:5990-6005

EXAMINER	**DATE CONSIDERED**

Form PTO-1449 Modified List of Patents and Publications Cited by Applicant (Use several sheets if necessary) U.S. Department of Commerce	Docket No. **UT-0031**	Serial No. **09/813,429**
	Applicant **Mayer-Proschel et al.**	
	Filing Date **March 21, 2001**	Group **1645**

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	AJ	Forsberg-Nilsson et al., "Platelet-Derived Growth Factor Induces Chemotaxis of Neuroepithelial Stem Cells", *J. Neurosci. Res.* **1998** 53:521-530
	AK	Gage F.H., "Mammalian Neural Stem Cells", *Science* **2000** 287:1433-1438
	AL	Gage et al., "Multipotent Progenitor Cells in the Adult Dentate Gyrus", *J. Neurobiol.* **1998** 36:249-266
	AM	Garcia-Verdugo et al., "Architecture and Cell Types of the Adult Subventricular Zone: In Search of the Stem Cells", *J. Neurobiol.* **1998** 36:234-248
	AN	Haydar et al., "Differential Modulation of Proliferation in the Neocortical Ventricular and Subventricular Zones", *J. Neurosci.* **2000** 20:5764-5774
	AO	Horner et al., "Proliferation and Differentiation of Progenitor Cells Throughout the Intact Adult Rat Spinal Cord", *J. Neurosci.* **2000** 20:2218-2228
	AP	Johansson et al., "RAPID COMMUNICATION Neural Stem Cells in the Adult Human Brain", *Exp. Cell Res.* **1999** 253: 733-736
	AQ	Johansson et al., "Identification of a Neural Cell Stem in the Adult Mammalian Central Nervous System", *Cell* **1999** 96:25-34
	AR	Kalyani et al., "Neuroepithelial Stem Cells from the Embryonic Spinal Cord: Isolation, Characterization, and Clonal Analysis", *Dev. Biol.* **1997** 186:202-223

EXAMINER	**DATE CONSIDERED**

Form PTO-1449 Modified List of Patents and Publications Cited by Applicant (Use several sheets if necessary) U.S. Department of Commerce	Docket No. **UT-0031**	Serial No. **09/813,429**
	Applicant **Mayer-Proschel et al.**	
	Filing Date **March 21, 2001**	Group **1645**

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	AS	Kalyani et al., "Expression of EGF Receptor and FGF Receptor Isoforms during Neuroepithelial Stem Cell Differentiation", *J. Neurobiol.* **1999** 38:207-224
	AT	Kirschenbaum et al., "In vitro Neuronal Production and Differentiation by Precursor Cells Derived from the Adult Human Forebrain", *Cereb. Cortex* **1994** 4:576-589
	AU	Kukekov et al., "Multipotent Stem/Progenitor Cells with Similar Properties Arise from two Neurogenic Regions of Adult Human Brain[1]", *Exp. Neurol.* **1999** 156:333-344
	AV	Lois C. and Alvarez-Buylla A., "Proliferating subventricular zone cells in the adult mammalian forebrain can differentiate into neurons and glia", *Proc. Natl Acad. Sci. USA* **1993** 90:2074-2077
	AW	Marmur et al., "Isolation and Developmental Characterization of Cerebral Cortical Multipotent Progenitors", *Dev. Biol.* **1998** 204:577-591
	AX	Miraglia et al., "A Novel Five-Transmembrane Hematopoietic Stem Cell Antigen: Isolation, Characterization, and Molecular Cloning", *Blood* **1997** 90:5013-5021
	AY	Morrison et al., "Prospective Identification, Isolation by Flow Cytometry, and In Vivo Self-Renewal of Multipotent Mammalian Neural Crest Stem Cells", *Cell* **1999** 96:737-749
	AZ	Palmer et al., "Fibroblast Growth Factor-2 Activates a Latent Neurogenic Program in Neural Stem Cells from Diverse Regions of the Adult CNS", *J. Neurosci.* **1999** 19:8487-8497
	BA	Pagano et al., "Isolation and Characterization of Neural Stem Cells from the Adult Human Olfactory Bulb", *Stem Cells* **2000** 18:295-300

EXAMINER	**DATE CONSIDERED**

Form PTO-1449 Modified List of Patents and Publications Cited by Applicant (Use several sheets if necessary) U.S. Department of Commerce	Docket No. **UT-0031**	Serial No. **09/813,429**
	Applicant **Mayer-Proschel et al.**	
	Filing Date **March 21, 2001**	Group **1645**

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	BB	Piper et al., Immunocytochemical and Physiological Characterization of a Population of Cultured Human Neural Precursors", *J. Neurophysiol.* **2000** 84:534-548
	BC	Quinn et al., "Lineage Restriction of Neuroepithelial Precursor Cells From Fetal Human Spinal Cord", *J. Neurosci. Res.* **1999** 57:590-602
	BD	Rao M.S., "Multipotent and Restricted Precursors in the Central Nervous System", *Anat. Rec.* **1999** 257:137-148
	BE	Reynolds B.A. and Weiss S., "Clonal and Population Anaylses Demonstrate That an EGF-Responsive Mammalian Embryonic CNS Precursor Is a Stem Cell", *Dev. Biol.* **1996** 175:1-13
	BF	Stemple D.L. and Anderson D.J., "Isolation of a Stem Cell for Neurons and Glia from the Mammalian Neural Crest", *Cell* **1992** 71:973-985
	BG	Svendsen et al., "A new method for the rapid and long term growth of human neural precursor cells", *J. Neurosci. Methods* **1998** 85:141-152
	BH	Tsai R.Y. and McKay R.D., "Cell Contact Regulates Fate Choice by Cortical Stem Cells", *J. Neurosci.* **2000** 20:3725-3735
	BI	Vescovi et al., "Isolation and Cloning of Multipotential Stem Cells from the Embryonic Human CNS and Establishment of Transplantable Human Neural Stem Cell Lines by Epigenetic Stimulation", *Exp. Neurol.* **1999** 156:71-83
	BJ	Villa et al., "Establishment and Properties of a Growth Factor-Dependent, Perpetual Neural Stem Cell Line from the Human CNS", *Exp. Neurol.* **2000** 161:67-84

EXAMINER	**DATE CONSIDERED**

Form PTO-1449 Modified List of Patents and Publications Cited by Applicant (Use several sheets if necessary) U.S. Department of Commerce	Docket No. **UT-0031**	Serial No. **09/813,429**
	Applicant **Mayer-Proschel et al.**	
	Filing Date **March 21, 2001**	Group **1645**

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	BK	Weigmann et al., "Prominin, a novel microvilli-specific polytopic membrane protein of the apical surface of epithelial cells,is targeted to plasmalemmal protrusions of non-epithelial cells", *Proc. Natl Acad. Sci. USA* **1997** 94:12425-12430
	BL	Weiss et al., "Multipotent CNS Stem Cells Are Present in the Adult Mammalian Spinal Cord and Ventricular Neuroaxis", *J. Neurosci.* **1996** 16:7599-7609
	BM	Yin et al., "AC133, a Novel Marker for Human Hematopoietic Stem and Progenitor Cells", *Blood* **1997** 90:5002-5012

EXAMINER	DATE CONSIDERED